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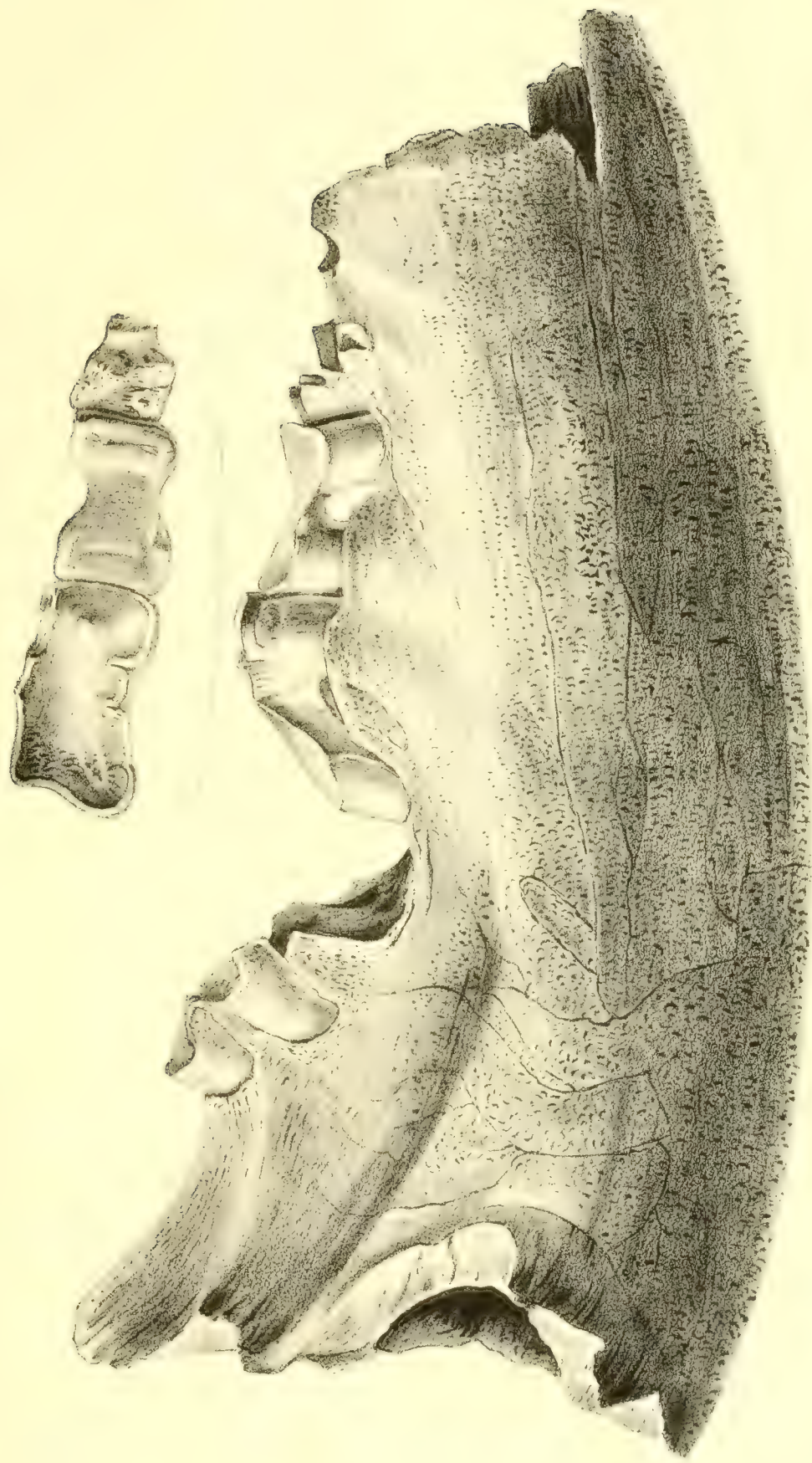


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HARLANUS AMERICANUS *Harlan*

Harlan

Harlan

tinguishes this tooth in the *Lophiodon* from that of the Tapir. The teeth of the fossil from Georgia a little exceed in size those of the *Lophiodon Isselanus* (*Grand Lophiodon d'Issel*, Cuvier, 'Ossements Fossiles,' ed. 1822, tom. 2, pt. 1, p. 184, pl. 3, fig. 3,) the antero-posterior diameter of the last molar in that species being one inch and eight lines, and in the present fossil one inch ten lines. But the depth of the jaw below the middle of the last molar in the present fossil is three inches; whilst that in the *Lophiodon Isselanus* in the figure cited, is scarcely two inches; and Cuvier expressly states (p. 186) that it surpasses in depth the corresponding part of the jaw of the *Lophiodon medius* (pl. 3, fig. 1,) which has molar teeth of the same size as in the *Lophiodon Isselanus*.

The present fossil has been described and figured in "Silliman's American Journal of Science," vol. 43, 1842, pl. 3, fig. 1, under the name of *Sus Americana*; Dr. Harlan conceiving that from its general appearance and number of the teeth this fragment bore a close analogy with the same part in the *Sus babirussa*, Buff., acknowledging, however, that the Babyroussa "was a much smaller animal." Besides the difference of size, the last molar in the fossil has the anterior transverse ridge proportionally larger, and the posterior lobe proportionally smaller than in the Babyroussa, resembling the *Lophiodon* in the points in which it thus differs from the species of *Sus* cited. The form of the fossil jaw differs at the part supporting the last molar from that in the Babyroussa, where the socket of the last molar overhangs the inner surface of the ramus, whilst in the fossil the inner surface of the ramus beneath the last molar describes a gentle convexity from the tooth to the lower margin of the ramus. The outer part of the ramus of the jaw of the Babyroussa begins to expand below the fourth and fifth molars, counting forwards from the last, to form the socket of the large tusk; but the fossil jaw does not offer the least indication of an enlargement for that purpose; and the fractured anterior end, as displayed in the cast, is very different in shape from the corresponding part of the jaw in the Babyroussa, and shows merely the wide dental canal, and no socket for the tusk which would be here situated in the Babyroussa or Wild Boar.

The nearest approximation which I could make from a study of a cast of the fossil in question to any known existing or extinct animal, was to the great tapiroid Pachyderms; but I added in my description of this cast in the "Catalogue of Fossil Mammalia and Birds in the College of Surgeons," 4to., 1845, p. 198, "that ulterior discoveries, may, indeed, show that the Lophiodont dentition was combined with other characters in the American fossil, necessitating a generic distinction, and it is well to remember that the dentition of the *Macranthenia*, of South America, a three-toed Pachyderm with an astragalus almost identical with that of the *Lophiodon*, and of a size which agrees with the jaw of the fossil *Sus Americana* of Harlan, has yet to be discovered."

The original of the cast shows the course of the enamel on the outer side of the

penultimate molar ; it there defines an anterior lobe of the crown about the one-third the antero-posterior extent of the crown, by a close, straight fold of enamel penetrating inwards about $2\frac{1}{2}$ lines.

The anterior lobe or transverse ridge of the corresponding tooth of a *Lophiodon* might, perhaps, present a similar appearance, if worn down to the base of the crown.

But in the present fossil, the enamel proceeds to define a middle lobe on the outer side of the crown, shorter than the foregoing, beyond which the enamel and dentine are worn obliquely away to the base of the posterior fang ; the indication of the middle external lobe or festoon of enamel is, however, decisive against its generic relationship with *Lophiodon*.

This indication of the arrangement of the enamel, slight as it is, reminds one of that in the lower molars of the *Toxodon*,* and another feature of resemblance is the apparent interruption of the enamel at the anterior part of the molar in the fossil. If the presence of two distinct fangs in the Georgian Fossil were adduced as distinguishing it from the *Toxodon*, it might be replied that perhaps the long curved rootless molars in that animal at the last period of age might, as in the Horse, acquire root.

But the trilobed character is on the outside of the molar in question, and on the inside of those of the *Toxodon* ; in which also the middle lobe only has a coat of enamel, not the anterior or posterior of the inner lobes : there is no doubt, therefore, that the Georgian Pachyderm is as generically distinct from *Toxodon*, as it is from *Lophiodon* ; and it would seem to have diminished the interval which divides the strange Gliriform Pachyderm of South America, from the more normal Tapiroid forms of Pachyderms which are found fossil in the old world.

As naturalists have accepted the latinized Indian word *Tapirus* as the generic name of the existing American Pachyderm, which makes the nearest approach to the present remarkable fossil, they will probably sanction the application to the genus and species which it represents, of the name *Harlanus Americanus* ;† in honour of the indefatigable and accomplished naturalist by whom the fossil was first made known to science.

Royal College of Surgeons, London, July 8th, 1846.

* Fossil Mammalia of the Beagle, pl. 5, fig. 2.

† The annexed drawing of this fossil was made in London under the supervision of Prof. Owen.





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